CLAIMS

What is claimed is:

1   1. A protocol-independent method for processing messages in an enterprise integration

2   application system having at least three processors, comprising the acts of:

3   • installing at least one host processor and at least one channel processor, each said

4   channel processor in operative communication with two corresponding

5   processors;

6   • receiving at least one received message at a first host processor via a source

7   channel processor, each received message having at least one corresponding

8   message key, said message key including corresponding processing indicia;

9   • maintaining dynamic configuration information for said first host processor,

10   including the acts of:

11   • associating each said host processor with corresponding communicating

12   channel processors operatively communicating with said host processor;

13   • associating each said host processor with corresponding transfer channel

14   processors operatively communicating with said first host processor;

15   • associating message keys with corresponding destination data, each said

16   destination datum including a destination host processor and a destination

17   channel processor;

18   • forwarding messages corresponding to said received message from said first host

19   processor to a destination transfer channel processor corresponding to a

20   destination host processor determined by reference to said destination data

21   corresponding to a message key of said received message;

22   whereby messages originating from a channel processor are dynamically routed through

23   said enterprise integration application system in accordance with said association

24   between message keys and destination data

1   2.   The method in claim 1, further including the act of updating dynamic configuration

2   information for said first host processor based upon the contents of said received

3   message.

1   3.   The method in claim 1, wherein said act of maintaining dynamic configuration

2   information for said first host processor further includes the act of associating each

3   said transfer channel processor with a communication protocol specification selected

4   from at least two communication protocol specifications; and wherein said act of

5   forwarding further includes the act of conforming with the communication protocol

6   specification associated with said destination transfer channel processor.

1   4.   The method in claim 1, wherein said enterprise integration application system

2   includes at least one terminal processor and the act of associating message keys with

3   corresponding destination data depends upon conforming to a predetermined set of

4   rules relating to the integration and operation of said at least one terminal processor

5   into said enterprise integration application.

1   5.   The method in claim 3, wherein said business rules include rules providing for the

2   translation of data from one termination application into a format suitable for use for

3   a second termination application.

1   6.   The method in claim 1, wherein said messages include a unique primary message

2   key; and wherein said message keys further includes identification of an origin host

3   processor, an origin channel processor, origin processing indicia, a source host

4   processor, a source channel processor, and source processing indicia.

1   7.   The method in claim 6, wherein the method of forwarding messages includes the acts

2   of:

3   • determining destination data corresponding to said received message by reference

4   to a message key of said received message;

5   • preparing a forwarding message corresponding to said received message and said

6   destination datum; and

7   • sending each said forwarding message to said transfer channel processor

8   corresponding to said destination datum host processor.

1   8.   The method in claim 1, further including the act of determining whether said received

2   message is a transfer message having an original message and an original message

3   key; wherein said act of determining destination data corresponding to said received

4   message includes the acts of:

5   • determining destination data by reference to said primary key when said received

6   message is not a transfer message; and

7   • determining destination data by reference to said original message key when said

8   received message is a transfer message;

9   and wherein said act of preparing a forwarding message includes the acts of:

10   • preparing a message substantially similar to said included message when said

11   received message is a transfer message and said destination host processor is said

12   first host processor;

13   • preparing a transfer message including said received message when said received

14   message is not a transfer message and said destination host processor is not said

15   first host processor; and

16   • preparing a message substantially similar to said received message when either

17   said received message is not a transfer message and said destination host

18   processor is said first host processor; or when said received message is a transfer

19   message and said destination host processor is said first host processor.

1   9. The method in claim 1, wherein said act of maintaining dynamic configuration

2   information for said first host processor further includes the act of associating each

3   communicating channel processor with a communication protocol specification

4   selected from a predetermined set of at least two communication protocol

5   specifications; and wherein all acts of sending a message from a host processor to an

6   communicating channel processor are performed in conformance with the

7   communication protocol specification associated with said communicating channel

8   processor.

1   10. A system for processing messages in an enterprise integration application system

2   having at least three processors, comprising:

3   • logic for the act of installing at least one host processor and at least one channel

4   processor, each said channel processor in operative communication with two

5   corresponding processors;

6   • logic for the act of receiving at least one received message at a first host processor

7   via a source channel processor, each received message having at least one

8   corresponding message key, said message key including corresponding

9   processing indicia;

10   • logic for the act of maintaining dynamic configuration information for said first

11   host processor, including:

12   • logic for the act of associating each said host processor with corresponding

13   communicating channel processors operatively communicating with said host

14   processor;

15   • logic for the act of associating each said host processor with corresponding

16   transfer channel processors operatively communicating with said first host

17   processor;

18   • logic for the act of associating message keys with corresponding destination

19   data, each said destination datum including a destination host processor and a

20   destination channel processor;

21   •   logic for the act of forwarding messages corresponding to said received message

22   from said first host processor to a destination transfer channel processor

23   corresponding to a destination host processor determined by reference to said

24   destination data corresponding to a message key of said received message;

25   whereby messages originating from a channel processor are dynamically routed through

26   said enterprise integration application system in accordance with said association

27   between message keys and destination data

1   11. The system in claim 10, further including logic for the act of updating dynamic

2   configuration information for said first host processor based upon the contents of said

3   received message.

1   12. The system in claim 10, wherein said logic for the act of maintaining dynamic

2   configuration information for said first host processor further includes logic for

3   associating each said transfer channel processor with a communication protocol

4   specification selected from at least two communication protocol specifications; and

5   wherein said logic for the act of forwarding further includes logic for conforming

6   with the communication protocol specification associated with said destination

7   transfer channel processor.

1   13. The system in claim 10, wherein said enterprise integration application system

2   includes at least one terminal processor and said logic for the act of associating

3   message keys with corresponding destination data depends upon conforming to a

4   predetermined set of rules relating to the integration and operation of said at least one

5   terminal processor into said enterprise integration application.

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1   14. The system in claim 13, wherein said business rules include rules providing for the

2   translation of data from one termination application into a format suitable for use for

3   a second termination application.

1   15. The system in claim 10, wherein said messages include a unique primary message

2   key; and wherein said message keys further includes identification of an origin host

3   processor, an origin channel processor, origin processing indicia, a source host

4   processor, a source channel processor, and source processing indicia.

1   16. The system in claim 15, wherein the logic for forwarding messages includes:

2   • logic for the act of determining destination data corresponding to said received

3   message by reference to a message key of said received message;

4   • logic for the act of preparing a forwarding message corresponding to said received

5   message and said destination datum; and

6   • logic for the act of sending each said forwarding message to said transfer channel

7   processor corresponding to said destination datum host processor.

1   17. The system in claim 10, further including logic for the act of determining whether

2   said received message is a transfer message having an original message and an

3 original message key; wherein said logic for the act of determining destination data

4 corresponding to said received message includes:

5 • logic for determining destination data by reference to said primary key when said

6 received message is not a transfer message; and

7 • logic for the act of determining destination data by reference to said original

8 message key when said received message is a transfer message;

9 and wherein said logic for preparing a forwarding message includes:

10 • logic for the act of preparing a message substantially similar to said included

11 message when said received message is a transfer message and said destination

12 host processor is said first host processor;

13 • logic for the act of preparing a transfer message including said received message

14 when said received message is not a transfer message and said destination host

15 processor is not said first host processor; and

16 • logic for the act of preparing a message substantially similar to said received

17 message when either said received message is not a transfer message and said

18 destination host processor is said first host processor; or when said received

19 message is a transfer message and said destination host processor is said first host

20 processor.

1 18. The system in claim 10, wherein said logic for the act of maintaining dynamic

2 configuration information for said first host processor further includes logic for

3 associating each communicating channel processor with a communication protocol

4 specification selected from a predetermined set of at least two communication

5 protocol specifications; and wherein all logic for the acts of sending a message from a

6 host processor to an communicating channel processor specifies communication in

7 conformance with the communication protocol specification associated with said

8 communicating channel processor.

1 19. A computer program product for processing messages in an enterprise integration

2 application system having at least three processors, comprising:

3 • computer code for the act of installing at least one host processor and at least one

4 channel processor, each said channel processor in operative communication with

5 two corresponding processors;

6 • computer code for the act of receiving at least one received message at a first host

7 processor via a source channel processor, each received message having at least

8 one corresponding message key, said message key including corresponding

9 processing indicia;

10 • computer code for the act of maintaining dynamic configuration information for

11 said first host processor, including:

12 • computer code for the act of associating each said host processor with

13   corresponding communicating channel processors operatively communicating

14   with said host processor;

15 • computer code for the act of associating each said host processor with

16   corresponding transfer channel processors operatively communicating with

17   said first host processor;

18   • computer code for the act of associating message keys with corresponding

19   destination data, each said destination datum including a destination host

20   processor and a destination channel processor;

21   • computer code for the act of forwarding messages corresponding to said received

22   message from said first host processor to a destination transfer channel processor

23   corresponding to a destination host processor determined by reference to said

24   destination data corresponding to a message key of said received message;

25   whereby messages originating from a channel processor are dynamically routed through

26   said enterprise integration application system in accordance with said association

27   between message keys and destination data

1   20. The system in claim 19, further including computer code for the act of updating

2   dynamic configuration information for said first host processor based upon the

3   contents of said received message.

1   21. The system in claim 19, wherein said computer code for the act of maintaining

2   dynamic configuration information for said first host processor further includes

3   computer code for associating each said transfer channel processor with a

4   communication protocol specification selected from at least two communication

5   protocol specifications; and wherein said computer code for the act of forwarding

6   further includes computer code for the act of conforming with the communication

7   protocol specification associated with said destination transfer channel processor.

1   22. The system in claim 19, wherein said enterprise integration application system

2   includes at least one terminal processor and said computer code for the act of

3   associating message keys with corresponding destination data depends upon

4   conforming to a predetermined set of rules relating to the integration and operation of

5   said at least one terminal processor into said enterprise integration application.

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1   23. The system in claim 22, wherein said business rules include rules providing for the

2   translation of data from one termination application into a format suitable for use for

3   a second termination application.

1   24. The system in claim 19, wherein said messages include a unique primary message

2   key; and wherein said message keys further includes identification of an origin host

3   processor, an origin channel processor, origin processing indicia, a source host

4   processor, a source channel processor, and source processing indicia.

1   25. The system in claim 24, wherein the computer code for the act of forwarding

2   messages includes:

3   • computer code for the act of determining destination data corresponding to said

4   received message by reference to a message key of said received message;

5   • computer code for the act of preparing a forwarding message corresponding to

6   said received message and said destination datum; and

7   • computer code for the act of sending each said forwarding message to said

8   transfer channel processor corresponding to said destination datum host processor.

1   26. The system in claim 19, further including computer code for the act of determining

2   whether said received message is a transfer message having an original message and

3   an original message key; wherein said computer code for determining destination data

4   corresponding to said received message includes:

5   • computer code for the act of determining destination data by reference to said

6   primary key when said received message is not a transfer message; and

7   • computer code for the act of determining destination data by reference to said

8   original message key when said received message is a transfer message;

9   and wherein said computer code for preparing a forwarding message includes:

10   • computer code for the act of preparing a message substantially similar to said

11   included message when said received message is a transfer message and said

12   destination host processor is said first host processor;

13   • computer code for the act of preparing a transfer message including said received

14   message when said received message is not a transfer message and said

15   destination host processor is not said first host processor; and

16   • computer code for the act of preparing a message substantially similar to said

17   received message when either said received message is not a transfer message and

18   said destination host processor is said first host processor; or when said received

19   message is a transfer message and said destination host processor is said first host

20   processor.

1   27. The system in claim 19, wherein said computer code for the act of maintaining

2   dynamic configuration information for said first host processor further includes

3   computer code for the act of associating each communicating channel processor with

4   a communication protocol specification selected from a predetermined set of at least

5   two communication protocol specifications; and wherein all computer code for the act

6   of sending a message from a host processor to an communicating channel processor

7   specifies communication in conformance with the communication protocol

8   specification associated with said communicating channel processor.